

## Lightweight Radiator Fins for Space Nuclear Power, Phase I

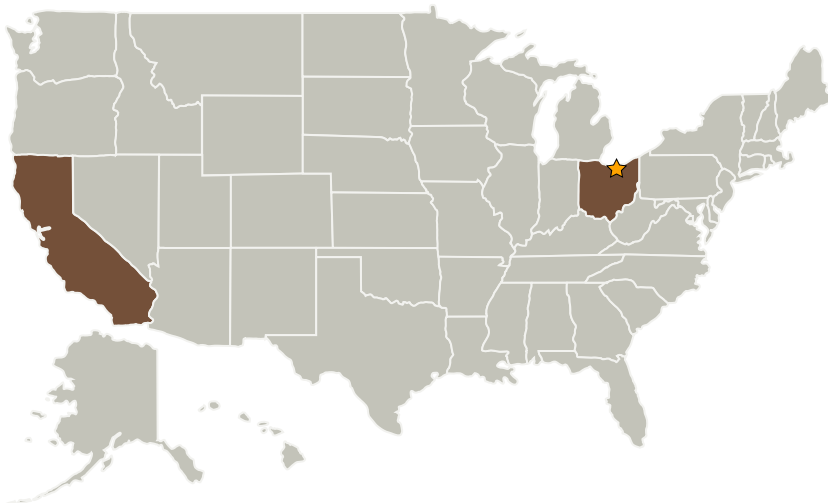
Completed Technology Project (2005 - 2005)



## Project Introduction

This SBIR Phase 1 project shall investigate concept radiator fins that incorporate novel carbon materials for improved performance of segmented high temperature space radiator systems based on heat pipes with attached radiator fins. The novel carbon materials apply to improvements in several critical features: thermal emissivity, in-plane conductivity, fin stiffness, fin/pipe thermal interface, and lightweight shielding against micrometeorites. Phase 1 will obtain system requirements from a prime contractor for nuclear space power, and assess the potential benefits compared with current baseline materials. A small carbon radiator fin component will be fabricated and integrated with a relevant pipe to demonstrate the materials concepts.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Energy Science Laboratories, Inc.	Supporting Organization	Industry	San Diego, California



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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Glenn Research Center (GRC)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

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## Primary U.S. Work Locations

California

Ohio

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

Carlos Torrez

### Project Manager:

Christopher J Scolese

### Principal Investigators:

Timothy E Knowles

Ramon Lugo

## Technology Areas

### Primary:

- TX14 Thermal Management Systems
  - └ TX14.2 Thermal Control Components and Systems
    - └ TX14.2.3 Heat Rejection and Storage